



## **Bird Monitoring Report, 2017 – Idylwild IBA**

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Idylwild (IBA) is a site of statewide importance for bird conservation. It was identified as an IBA using data from a Bird Blitz survey and a nightjar carried out in 2007, and surveys for Northern Bobwhite carried out by Md DNR. These surveys indicated that four at-risk species were present in significant numbers (Northern Bobwhite, Eastern Whip-poor-will, Prothonotary Warbler, Worm-eating Warbler) and a fifth, Prairie Warbler, may have been present in significant numbers. Two other at-risk species (Wood Thrush and Grasshopper Sparrow) were found in 2007 but it was unlikely that their populations exceeded thresholds set in the IBA criteria. The site also qualifies as an IBA for its diverse assemblage of Forest Interior-Dwelling Species (FIDS), supporting 17 of 24 FIDS that regularly breed in Maryland's Coastal Plain. Population thresholds for IBA site selection and the bird species assemblages characteristic of Maryland's major habitat types are provided in the IBA Criteria for Site Selection, available online at <http://md.audubon.org/conservation/important-bird-areas> .

In 2017, Audubon Maryland-DC and Maryland Bird Conservation Partnership (MBCP) implemented a program of bird monitoring at several IBAs across Maryland, with funding from Maryland Department of Natural Resources and individual donors. The goal of the monitoring was to provide managers with data on bird abundance and location and to provide a current baseline against which to measure population trends in the future. At Idylwild IBA, bird monitoring was carried out in the central area of the IBA.

### **Methods**

Birds were monitored using point count surveys conducted during the height of the bird breeding season between 21 May and 30 June. Each point count location was surveyed twice with the two replicate surveys at least 1 week apart. Observers conducted the first survey before 11 June and the second survey on 11 June or later. Surveys were completed during the first four hours after sunrise generally between 0600 and 1000 EST. Weather and wind conditions were recorded during each count following the Beaufort scale and standard weather codes. Surveys were not conducted during high wind conditions (> 12 mph) or during dense fog, steady drizzle, or prolonged rain.

Bird survey locations were divided into routes that could each be easily covered by an observer in a single morning. In order to reduce the probability that individual birds were counted more than

once (from two points) survey locations were selected using ArcGIS so that a minimum of 300 meters separated points. The volunteer observers were assigned a route and navigated to survey locations using the Avenza app on Smart phones. This eliminated the need to mark survey points with flagging.

The survey routes were located in two of the four habitat types in Idylwild WMA: 1) Agriculture, grassland and early successional forest (HMU1), and 2) Oak-pine forest (HMU 2). The bottomland hardwood and gravel pit habitats of the WMA were not covered by these surveys.

Counts at each survey location were 5 minutes in duration, with counts split between an initial 3-minute period and the following 2-minute period. The division into two time periods can provide a measure of how detectable each species is within a given timeframe. All birds seen or heard upto an unlimited distance were counted – we did not ask observers to estimate distance to birds because observers generally vary greatly in their ability to do this accurately.

**Table 1.** Bird survey routes and dates of survey completion at South River Greenway IBA in 2017.

Route name	Habitat	# survey points	Observer(s)	Date of 1 <sup>st</sup> visit	Date of 2 <sup>nd</sup> visit
Idylwild A	Forest and grassland	10	Dana and Roland Limpert	6-3-2017	6-16-2017
Idylwild B	Forest and grassland	10	Dana and Roland Limpert	6-10-2017	6-24-2017
Idylwild Nightjar	Forest and grassland	10	Dana and Roland Limpert	6-3-2017	N/A

Observers recorded birds during surveys on field datasheets designed by Audubon and MBCP, and, after surveys were completed, entered data into the computer on Excel spreadsheet templates also provided by Audubon and MBCP. Audubon staff and volunteers combined and summarized the individual datasets submitted by observers.

In addition to diurnal songbirds, observers monitored nightjars at Idylwild with nocturnal surveys following the standard protocol of the Nightjar Survey Network ([www.nightjars.org](http://www.nightjars.org)). One survey route of 10 count points was completed once during the period 1 – 17 June. The survey began at least 30 minutes after sunset and lasted about 1 hour, and took place when the moon was above the horizon and not obscured by clouds. Survey points were selected to be a subset of the diurnal point count routes Idylwild A and B. The Nightjar Survey Network instructions stipulate that survey points should be 1 mile (1.6 km) apart. Our survey placed points a minimum of 600m apart, so it is possible that individual birds may have been counted from more than one survey point. Surveys lasted 6 minutes, and nightjars were recorded in each of the 1-minute segments in the survey.

## **Results and Discussion**

At Idylwild in 2017, two diurnal surveys were completed at each of 20 survey points, and 345 detections were made of 42 bird species. The number of detections does not equate directly to the number of individual birds detected because some individuals may have been detected on both survey visits.

Ten of the bird species detected were FIDS (see Table 2), and seven of these are listed as Species of Greatest Conservation Need (GCN) in Maryland’s State Wildlife Action Plan. Only two of the five most abundant species (Worm-eating Warbler, American Crow, Carolina Chickadee, Eastern Wood-pewee, Ovenbird) were FIDS. The mean number of birds detected per point was 8.63, and just 30% of these detections were FIDS, reflecting the open structure of the forest habitat, the relatively young age of the trees, and the mixture of habitat types covered by the surveys. It is notable that Worm-eating warbler was the most abundant species detected. Few sites in Maryland have this distinction, and it likely reflects a dense understory shrub layer.

Five of the bird species detected were shrub habitat specialists, as indicated in Table 2, reflecting the open structure of the oak-pine forest and the presence of early successional forest.

**Table 2.** Total detections and mean relative abundance (detections/point) of each species observed at 20 survey points in forest and grassland/early successional habitat at Idylwild IBA in 2017. Each point was surveyed twice, yielding a total of 40 counts.

<b>Species</b>	<b>Species of Greatest Conservation Need (GCN)</b>	<b>Habitat assemblage<sup>1</sup></b>	<b>Total detections</b>	<b>Mean detections/5-min. count</b>
<b>Acadian Flycatcher</b>	<b>GCN</b>	<b>FIDS</b>	<b>18</b>	<b>0.45</b>
American Crow			25	0.625
American Goldfinch			1	0.025
American Robin			1	0.025
<b>Black-and-White Warbler</b>	<b>GCN</b>	<b>FIDS</b>	<b>11</b>	<b>0.275</b>
Brown-headed Cowbird			15	0.375
Carolina Chickadee			21	0.525
Carolina Wren			1	0.025
Cedar Waxwing			13	0.325
Chipping Sparrow			13	0.325
Common Yellowthroat			9	0.225
Downy Woodpecker			3	0.075
Eastern Kingbird			1	0.025
Eastern Phoebe			3	0.075
Eastern Towhee		SHRUB	2	0.05
Eastern Wood-Pewee			20	0.5
Field Sparrow		SHRUB	15	0.375
Indigo Bunting			12	0.3

Mourning Dove			11	0.275
Northern Cardinal			14	0.35
Northern Flicker			1	0.025
Northern Mockingbird			1	0.025
<b>Ovenbird</b>	<b>GCN</b>	<b>FIDS</b>	<b>19</b>	<b>0.475</b>
<b>Pileated Woodpecker</b>		<b>FIDS</b>	<b>3</b>	<b>0.075</b>
Pine Warbler			1	0.025
Prairie Warbler		SHRUB	8	0.2
Red-bellied Woodpecker			2	0.05
<b>Red-eyed Vireo</b>		<b>FIDS</b>	<b>11</b>	<b>0.275</b>
Red-tailed Hawk			2	0.05
<b>Scarlet Tanager</b>	<b>GCN</b>	<b>FIDS</b>	<b>3</b>	<b>0.075</b>
Song Sparrow			1	0.025
<b>Summer Tanager</b>		<b>FIDS</b>	<b>5</b>	<b>0.125</b>
Tree Swallow			1	0.025
Tufted Titmouse			19	0.475
Turkey Vulture			5	0.125
White-eyed Vireo		SHRUB	4	0.1
Wild Turkey			2	0.05
Wood Duck			1	0.025
<b>Wood Thrush</b>	<b>GCN</b>	<b>FIDS</b>	<b>6</b>	<b>0.15</b>
<b>Worm-eating Warbler</b>	<b>GCN</b>	<b>FIDS</b>	<b>28</b>	<b>0.7</b>
Yellow Warbler			1	0.025
Yellow-billed Cuckoo			8	0.2
Yellow-breasted Chat		SHRUB	3	0.075
<b>Yellow-throated Vireo</b>	<b>GCN</b>	<b>FIDS</b>	<b>1</b>	<b>0.025</b>
Total relative abundance				8.63
Total FIDS relative abundance				2.60
Total SHRUB birds relative abundance				0.75

<sup>1</sup>Habitat assemblage indicates specialist birds as defined by Maryland-DC Important Bird Areas Program Criteria for site selection; available online at <http://md.audubon.org/conservation/important-bird-areas-0>

Some habitat specialists present at the site were not detected by these point count surveys. Prothonotary Warbler and Louisiana Waterthrush inhabit the bottomland hardwood forests in HMU3, and American Woodcock, Northern Bobwhite and Brown Thrasher inhabit early successional habitats at Idylwild.

The nightjar survey on 3 June detected Eastern Whip-poor-wills at six out of ten survey points (see Table 3), and these were mostly in the more forested interior parts of the site – nightjars

were not heard at points along the eastern edge of the forest. The mean detection rate was 0.9 birds/point.

**Table 3.** Numbers of individual nightjars detected in each minute of the nightjar survey conducted at Idylwild IBA on June 3, 2017.

<b>Stop #</b>	<b>Point ID</b>	<b>Species</b>	<b>Minute 1</b>	<b>Minute 2</b>	<b>Minute 3</b>	<b>Minute 4</b>	<b>Minute 5</b>	<b>Minute 6</b>
1	B2	None	0	0	0	0	0	0
2	B9	Eastern Whip-poor-will	1	1	1	1	1	1
3	B7	Eastern Whip-poor-will	1	1	2	2	2	2
4	B6	Eastern Whip-poor-will	1	1	2	2	1	2
5	B11	Eastern Whip-poor-will	1	1	1	1	1	1
6	A1	None	0	0	0	0	0	0
7	A3	Eastern Whip-poor-will	1	1	1	1	0	0
8	A5	Eastern Whip-poor-will	2	2	1	1	1	1
9	A7	None	0	0	0	0	0	0
10	A10	None	0	0	0	0	0	0

#### Attachments

1. Map of location of bird survey points in 2017.
2. Monitoring birds at IBAs, 2017 – Instructions.
3. Nightjar survey network instructions.

#### Data Associated with this report

The following data associated with this report are available:

1. Field data sheets containing raw data collected by volunteers are stored at the offices of Audubon Maryland-DC.
2. Bird survey data were entered into an Excel database by Audubon Maryland-DC. and summarized by pivot table. Filenames: IdlwildMonitoring\_2017-12-08 .
3. A GIS shapefile of bird survey point locations is held by Audubon Maryland-DC and by Maryland Bird Conservation Partnership.